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May 14, 1953

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Washington 25, D. C.

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Dear _____:

Enclosed for your files is the original copy of our latest Status Report on the use of the side-tone delay instrument as an interrogation device. Also enclosed for your use is a duplicate which you requested in your letter to us dated February 20, 1953.

Very truly yours,

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STATUS REPORT

Research on an Interrogation Device and Procedure

May 13, 1953

The primary aim and purpose of this project is to obtain a successful interrogation device from the effects of side-tone delay, together with an appropriate procedure for its use with a minimum number of attachments.

The secondary aim, being developed in this laboratory, is to obtain more easily interpreted polygraph records by use of side-tone delay in conjunction with the polygraph.

B _____ delivered to this laboratory a more refined side-tone delay (STD) instrument on March 5, 1953. The construction of this new instrument was requested by the investigators with the belief that its refinements would eliminate some of the difficulties encountered in previous instruments. The refinements consisted of a variable tape speed which was incorporated with the erase, record, and playback head assembly of the standard Magnecord. In order to accomplish this, a standard Magnecord recording unit was completely dismantled and then rebuilt with a variable tape speed. Also the standard Magnecord synchronous motor was adjusted so as to drive a disc at variable distances from the axis. The newly constructed drive was free from wow and had a 1-10 speed range which meant the tape speed was 3" to 30" per second. This provided an easily adjustable variable in the

side-tone delay from 0.0416 to 0.416 seconds. The standard Magnecord endless-loop tape device was utilized in place of the standard two-reel device.

In February, 1953 the investigators decided that possibly better results could be obtained if the subject was not required to wear earphones. On May 12, 1953 additional apparatus was added to the variable-delay equipment so that it would be unnecessary for the subject to wear earphones. The elimination of the subject's earphones was accomplished by adding two throat microphones, an auxiliary amplifier, and two external speakers.

The microphones are of the crystal-contact type and were adapted as throat microphones since no commercial throat microphones were available. The subject's microphone is connected to the standard Magnecord amplifier, and the amplifier's meter switch is the STD off-and-on switch. The Magnecord's monitoring jack is the outlet from this instrument and it is connected to the auxiliary amplifier by a sound cable. The subject's speech goes through this auxiliary amplifier to the two external speakers. The second throat microphone is used by the interrogator, but this microphone is connected directly to the auxiliary amplifier, thence to the two external speakers.

Thus, the subject's speech can be delayed any time, while the interrogator's speech can never be delayed. Since the two voices are heard through the two external speakers, the subject will be less likely to suspect that his voice is being delayed because both voices will sound alike, even though the interrogator's voice is not delayed.

B Through experimentation at the _____ laboratory it was found that two external speakers were much more effective in inducing the STD effect than one speaker. With only one speaker the subject can turn his head and focus his attention away from the source of his delayed speech. The best results were obtained when the two speakers were placed on either side of the subject.

The variable-delay instrument delivered in March proved to be the most durable so far tested because of its improved design and better construction. It provided the interrogator with an instrument which did not have disturbing wow, flutter, or noises. The investigators thought that this improved instrument would provide a better evaluation of the variable delay because of these refinements. It was believed that more subjects would be affected by the side-tone delay phenomenon with this improved instrument. However, in actual criminal cases it was found that the subjects who were not affected by a predetermined 0.20 seconds delay were usually not affected when the variable-delay device was used. This was true even though the entire range from 0.0816 to 0.416 seconds was utilized. Furthermore, the subjects who were affected to any extent by the predetermined delay of 0.20 seconds were seldom affected to any greater extent when the delay was increased or decreased. These results again indicated to the investigators that possibly the subject's amount of education, intelligence or social consciousness was related to the amount of difficulty he experienced in speaking when the STD instrument was operating.

It was originally thought that the more difficult a guilty subject had in speaking because of the STD effect, the more likely he was to confess. However, it was discovered that many guilty subjects confessed even though their speech was unaffected by the STD device.

Therefore, since January the investigators were not too concerned about the effect of the side-tone delay per se, but they concentrated on the procedures to be used with the STD instrument so that confessions could be more easily and readily obtained. The results then obtained with the variable-delay instrument bore out this belief as well as the soundness of the plan of being more concerned with interrogational techniques and procedures rather than with the STD effect.

It was found that approximately the same percentage of guilty subjects confessed when the variable-delay instrument was used for the interrogation as when the one fixed delay instrument was used. From the inception of this contract to May 11, 1953 this percentage of confessions from interrogated guilty subjects amounted to approximately 56 per cent. This figure of 56 per cent can be contrasted to the percentage of criminal confessions gained at the laboratory between January 1, 1948 and December 31, 1952. During this five-year period, when no side-tone delay instruments were used on these subjects, approximately 62 per cent of the interrogated subjects did confess to the crime under investigation.

Thus when one reviews the past year in its entirety, it appears that the side-tone delay did not increase the percentage of confessions. When a confession was gained by the use of the STD instrument, it did not materially

reduce the time required for obtaining the confession, nor did it make the interrogation any easier. Furthermore, the investigators believe that the great majority of those who did confess would have confessed without the use of the STD instrument.

In fact, there is a good possibility that the use of the STD actually stopped a number of subjects from confessing their crimes. This was definitely proven to be true in two cases when, after fully confessing, the subjects stated that they did not confess earlier because of the STD and that they waited until the STD instrument was turned off before doing so. Also, it is believed that during many other interrogations the guilty subjects were so confused and bewildered by the STD effect that they were no longer concerned about their crime and were not listening to what the interrogator said. When the subject is actually distracted by the effects of the STD, the interrogator's persuasiveness is lost and there is little likelihood of obtaining a confession.

It is the opinion of the investigators that the future holds very little hope for the side-tone delay instrument as an effective interrogation device.

Less extensively tested in this laboratory was the hypothesis that the use of the STD would produce more easily interpreted polygraph records. The investigators considered this so important that they added it to the project as its secondary aim. Various types of answers (yes or no, short-term, long-term, and narrative type answers) were experimented with during polygraph tests when the STD instrument was also being operated.

In the majority of instances the STD was ineffective in producing the desired results, and in many instances the STD affected polygraph records so that they were more difficult to interpret. In fact, on two occasions the use of the STD actually defeated the purpose of the polygraph tests. On these occasions the slow-down delay caused the verified innocent subjects to respond as if they were actually guilty.

For these reasons the investigators believe that the STD instrument should not be used in conjunction with the polygraph test.